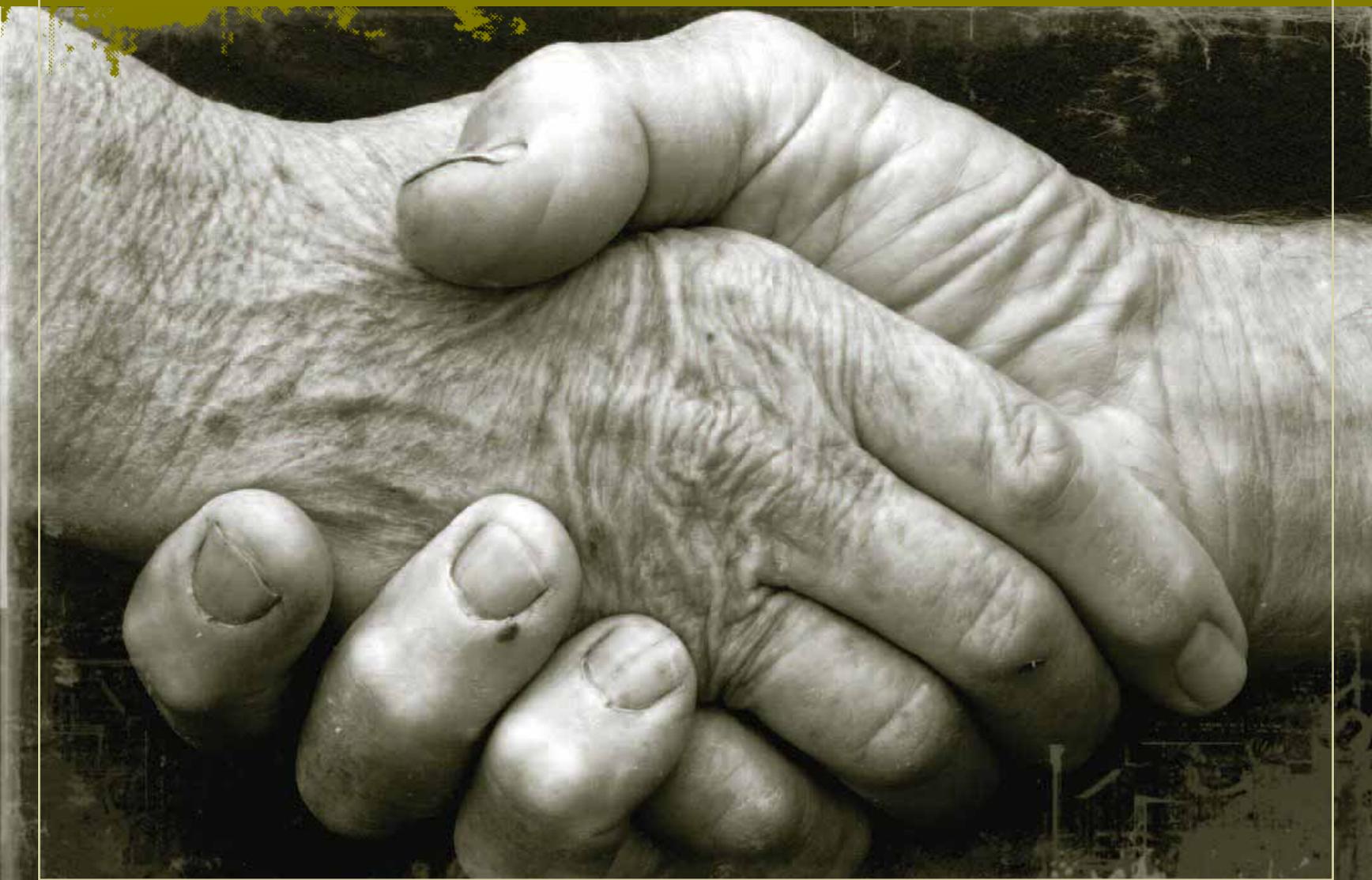


*common ground*  
ANNUAL REPORT 2005 / 2006

F O O T H I L L S   M O D E L   F O R E S T



RED F.P.O.



C O M M O N   G R O U N D

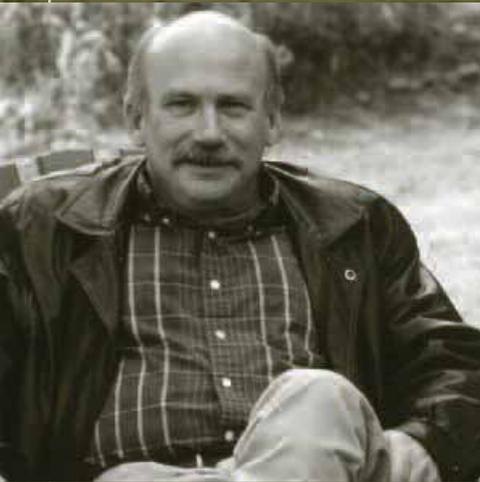
*It's the principle of nature — the strength of the whole relies on the health of its parts. The same is true of the Foothills Model Forest.*

*We are an organization that can only be successful through partnership and collaboration. Just as the forest draws life from countless sources, we grow through the individual contributions of many different interests.*



April 2005

We are a practical organization and will continue to develop our  
Internet mapping technologies so tools such as Integrated Website  
Access Plan and gozilly bear Resources Selection Function may  
can be accessed from a desktop in Calgary, Whitecourt or Jasper  
Throughout Resource Management Executive Series,



message from  
the president



The Foothills Model Forest is a partnership-driven, relevant and focused organization committed to developing knowledge and tools that contribute to sustainable communities and landscapes. Over the last 14 years, in partnership with the Canadian Forest Service, we have worked closely with our three shareholders – Alberta Sustainable Resource Development, Jasper National Park and West Fraser Mills Ltd. – to ensure our research is relevant to their land management questions and challenges.

This long-term commitment to the Foothills Model Forest provides us with stability and security to develop our expertise and infrastructure. This foundation, coupled with our flexibility, enable us to work with over 80 other partners to develop solutions to very specific questions such as growth and yield and the regeneration of forest stands, maintaining water quality and quantity, emulating natural disturbance in management plans, and minimizing the industrial footprint on wildlife habitat. Listening and responding to the needs of our partners is the key driver of our organization's success.

Over the last 12 months strategic planning sessions were held involving our partners, peers, staff and researchers. The Board of Directors built on this process and developed a Five-Year Business Plan. In our future Foothills Model Forest will remain true to its core values of working with our partners developing tools to enable sustainable forest and land management. This will be achieved through the continuation of efficient and action oriented program areas. The Foothills Model Forest's GIS program and systems, as well as its approach to knowledge transfer, will continue to enable the organization to foster partnerships and network relationships that will ensure good science contributes to the sustainability of Alberta's forest lands and communities.

We are a practical organization and will continue to develop our Internet mapping technologies so tools such as Integrated Industry Access Plan and grizzly bear Resource Selection Function maps can be accessed from a desktop in Calgary, Whitecourt or Jasper. Through the Resource Management Executive Series, we will continue to build and foster relationships with policy makers from industry and government to help fill the communications gap between researchers and policy makers. We will continue to work with organizations such as Inside Education and the Science Alberta Foundation so accurate and current knowledge about Alberta's forests and communities is used in Alberta's classrooms.

The Foothills Model Forest landscape and communities are busy. With the increase in oil and gas exploration and development, as well as the arrival of mountain pine beetle in Alberta, it is critical that all stakeholders use good science to guide land use policy, planning and individual actions. The Foothills Model Forest is well positioned to work with partners on developing knowledge and tools to address the accelerating interest in climate change and water conservation. We will continue to implement processes that result in effective Aboriginal involvement in resource management and development.

Natural Resources Canada has recently introduced the Forest Communities Program to replace Canada's Model Forest Program. The Foothills Model Forest will be applying to become a site in this new Program because it is consistent with our organization's values and goals. We have a long history of funding research to better understand the social and economic values of rural Alberta. We have transferred this knowledge to municipal politicians and others responsible for vibrant forest communities. We are proud of our partner relationships with Aboriginal communities and our track record at working with resource-based communities. With our partnership-based philosophy we are well positioned to ensure Alberta's prominence in influencing sustainable resource management nationally and internationally.

As I thank the partners, board, employees and researchers for the very successful years behind us, I look forward to an exciting future where the Foothills Model Forest contributes to sustainable landscapes and communities in Alberta and beyond. Many of our employees and researchers state that the biggest reason they enjoy working at Foothills Model Forest is that their efforts "make a difference on the landscape". We will remain guided by this measure of success.

JIM LeLACHEUR

Phase III of the Canadian Model Forest Network has been interesting and exciting. Since 2002, our Vision and objectives provided a framework and focus for our partners, Board of Directors, program leads and staff. Our annual work plan process ensures that programs and projects are consistent and supportive of our Phase III Vision and objectives.

**OBJECTIVE 1 Demonstrate Sustainable Forest Management.**

By working with our partners on numerous projects we have demonstrated sustainable forest management. Two very good examples are the Highway 40 North Demonstration Project and the Hardisty Creek Restoration Project. The Hardisty Creek Restoration Project has created community stewardship for this Creek and serves as a demonstration site for creek restoration.

Highway 40 North Demonstration Project: Throughout Phase III, three forest companies and three government ministries invested countless hours into developing a single forest management plan that spans jurisdictional boundaries. The foundation of the plan is natural disturbance patterns. This project demonstrates sustainable forest management and will help companies, government and communities mitigate the impact of mountain pine beetle.

**OBJECTIVE 2 Develop and implement mechanisms that result in wider understanding and application of accrued knowledge and technology for sustainable forest management.**

In the last five years we have developed knowledge and tools that are used in land and forest management. The Grizzly Bear Research Program has developed resource selection function models. Resource selection function models quantify and illustrate the likelihood of grizzly bears using the landscape. Many Alberta-based forest companies use these models to minimize their impact on grizzly bear habitat. Many resource-based companies and government partners are interested in our Aboriginal Involvement Program's approach to Traditional Cultural Studies and a Referral Process. Many of these agencies have interests beyond the Foothills Model Forest boundaries.

**OBJECTIVE 3 Deliver communications and outreach programs that improve understanding of, and support for, sustainable forest management.**

In 2002, we increased our commitment to communications and outreach and hired a full-time position to do this work. Our interpretive programs are well-received and well-attended. Through our partnerships with Jasper National Park and Alberta Community Development we have reached over 12,000 people. In Phase III, we developed a new education program called GIS Day and look forward to building on its success.

**OBJECTIVE 4 Support and influence policy that improves the practice of sustainable forest management.**

Foothills Model Forest believes that using sound science to make policy decisions is critical to advancing sustainable forest and land management. Foothills Model Forest has been coordinating and conducting a grizzly bear DNA census on behalf of Alberta Sustainable Resource Development. The accrued knowledge, tools and datasets of our Grizzly Bear Research Program enable this census to be conducted through our organization in an efficient and effective manner. To date, a DNA census has been completed in three areas. Information from the DNA census was considered when Alberta Sustainable Resource Development put a moratorium on the grizzly bear hunt.

We have truly have gone beyond our boundaries and have influenced the practice and policies of sustainable forest management not only in Alberta but also in Canada. Some of our newer programs such as the Foothills Stream Crossing Program and the Caribou Landscape Management Association are working towards integrated land management.

Our track record demonstrates our ability to deliver on our commitments. We are excited about future opportunities to work with current and new partners on using sound science to contribute to sustainable landscapes and communities.

DON PODLUBNY

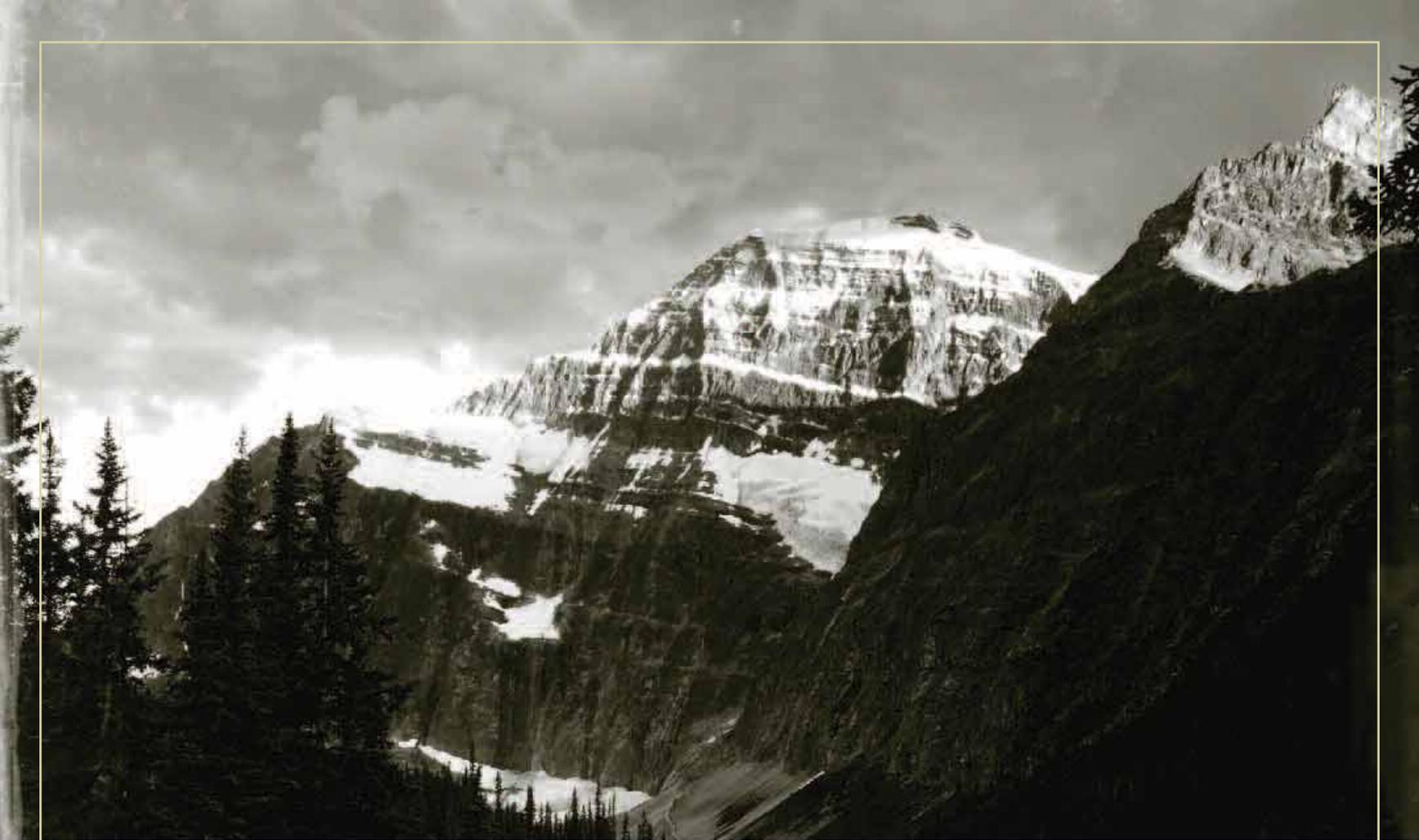
I can, with the utmost confidence, report that in the final year of Phase III, we have realized our Vision and achieved our Objectives.



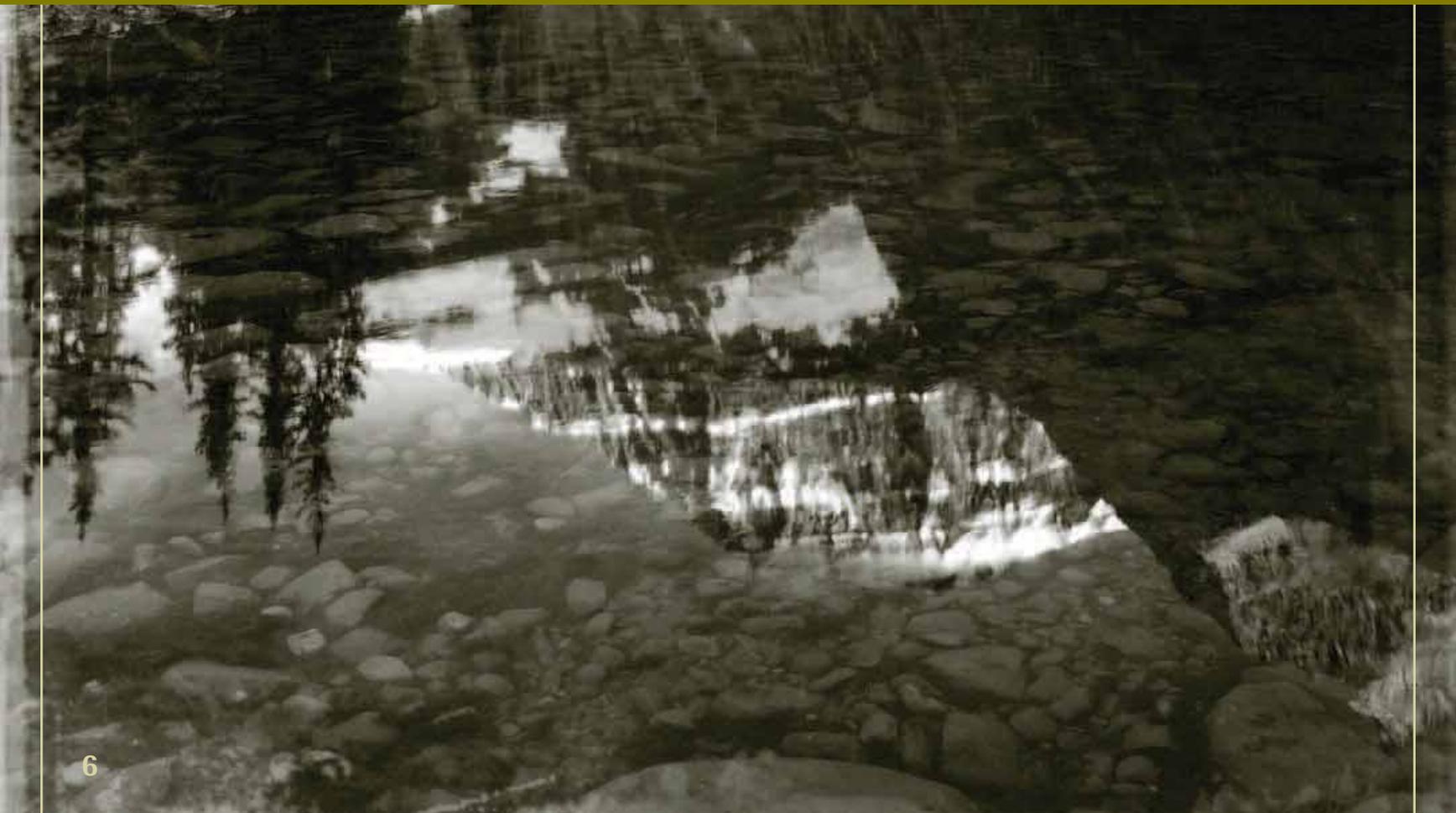
# *our vision*

The Foothills Model Forest, as a member of the Canadian Model Forest Network, will play a key role in establishing Alberta and Canada's reputation as a world leader in sustainable forest management.

**RED F.P.O.**



*our partners*



**DR MARWAN HASSAN, ASSOCIATE PROFESSOR**  
Department of Geography, UBC

My involvement with the Fish and Watershed Program brings real-world water problems into my classroom. It helps students understand that reality is not always the same as theory, it connects basic science to policy and management issues, and it allows my students to take part in cutting-edge research. All this can be difficult to achieve in a purely academic setting.

Society benefits enormously from this relationship as well. We have young people entering the work world with a real background in real issues. The Model Forest is in a low precipitation area, hence our studies are very important to the long-term supply of clean water to downstream communities; but also to fish and aquatic habitats via riparian management, and even to our understanding of climate change and natural and anthropogenic disturbances.

I look forward to the continuation of a partnership that allows me to do theoretical science as well as make a strong contribution to society.

**RACHELLE McDONALD, SPECIAL PROJECT MANAGER**  
Aseniwuche Winewak Nation of Canada

Foothills Model Forest has been an ideal home for our Traditional Cultural Study. The Model Forest's support network, partners and impressive track record for research have given our study stability, integrity and validity. We have a great team helping us develop the administrative and technical aspects of this project, as well as the assurance of world-class quality research.

Our community has worked with the Foothills Model Forest since 1998, when our Elders were involved with the first set of round table discussions on the multi-community Traditional Cultural Study. The goal of the study is to establish a marriage between modern technology, traditional knowledge and the custom of passing on our history orally in order to facilitate industry consultation.

As an Aboriginal community, we appreciate the fact that the Model Forest is a not-for-profit organization with a clear set of goals and mandates focused on pure research and its application. We look forward to the continuation of this valuable partnership.

**RON HOOPER, SUPERINTENDENT**  
Jasper Field Unit, Parks Canada

The Foothills Model Forest provides an excellent opportunity for research and research application on a landbase that encompasses protected areas, areas managed for resource harvesting extraction and public recreation, as well as communities.

Practical application of research findings and a commitment to knowledge transfer, as well as collaboration with partners advance land management and resource management in tangible and meaningful ways.

Jasper National Park has benefited greatly from Model Forest research in the management of grizzly bears, the application of natural disturbance research in the park's vegetation and forest management, and partnership and mutual support in responding to mountain pine beetle.

We will continue to focus on managing the park's landbase within a dynamic regional landscape. This is not achievable without the forum provided by the Foothills Model Forest for partnership, research sharing and collaboration.

**CLIFF HENDERSON, ASSISTANT DEPUTY MINISTER**  
Forests, Sustainable Resource Development

The Foothills Model Forest, as a member of the Canadian Model Forest Network, plays an important role in establishing the reputations of Alberta and Canada as leaders in sustainable forest management.

The partnerships encouraged through the Foothills Model Forest are perhaps its best asset. Some of Sustainable Resource Development's major programs are supported by the research and science provided through the Model Forest, such as grizzly bear research, woodland caribou, the Highway 40 North Demonstration Project, and the mountain pine beetle.

The science and research-based work performed by the Foothills Model Forest and its partners have been, and will continue to be, a large part of this organization's future. Sustainable Resource Development recognizes the importance and value of our relationship with the Foothills Model Forest and will continue to support it.

This report is all about  
the energy of partnerships.  
By bringing together a  
variety of interests, we can  
make profound changes.



**JIM LELACHEUR, MANAGER**  
Alberta Fibre Supply, West Fraser Mills Ltd.

Perhaps the greatest strength of Foothills Model Forest is its partnership base.

This longstanding association of shareholders, communities and other partners on a common landscape ensures that research develops the tools necessary to sustainably manage the forestlands on which we all depend. The partnership ensures that common needs and questions are addressed, and enables results to be applied on the landscape in a coordinated manner.

Society in general reaps many benefits from the research. For example, effectively managing the threat of mountain pine beetle on Alberta's forests will draw heavily on findings from initiatives such as the Natural Disturbance Program and the Highway 40 North Demonstration Project.

As another example, knowledge and tools developed by the Model Forest support fire management strategies in Jasper National Park and Willmore Wilderness Area, and forest management planning in Alberta and Saskatchewan.

August 2005

Another study conducted in cooperation with the Social Sciences Program examines how Jasper residents perceive the risks from wildfire, their acceptance of fuel modification within national parks, and their preferences for mitigation measures.

*Our common ground makes it possible.*



**WAYNE CLOGG, VICE PRESIDENT WOODLANDS**  
**West Fraser Timber**

Our involvement in the Foothills Model Forest helps ensure our staff members have the tools they need to manage all of our forest tenures in B.C. and Alberta in a sustainable manner. The partnership created by the Foothills Model Forest has helped to forge community, provincial and market-based trust in our management practices.

Research conducted on the Model Forest landbase provides our forest managers with ready access to research findings and management tools – two excellent examples being the Grizzly Bear and Natural Disturbance Programs.

The ability to maintain an economically sustainable business will depend on our ability to manage the forest in a way that balances the competing demands of resource access, recreation and conservation. Science-based tools such as those developed at the Model Forest are key to achieving this today and into the future.

**GLENN TAYLOR, MAYOR**  
**Town of Hinton**

The community of Hinton benefits from the Model Forest's scientific approach to sustainable resource development. It ensures a triple bottom line – sustainable practices, long-term employment and viability of the forest industry in our region.

At a very practical level, the Model Forest has been involved with several community projects, including socio-economic research that helps us understand the impact of shift work and drug and alcohol use in natural resource-based communities. The partnership supported the development of our Natural Resources Interpretive Park, which contributes to the education and understanding of what it is we do out here in the Green Zone of Alberta.

Throughout our relationship, we have found Model Forest staff and researchers to be very hands-on, committed, responsive participants in community joint ventures.

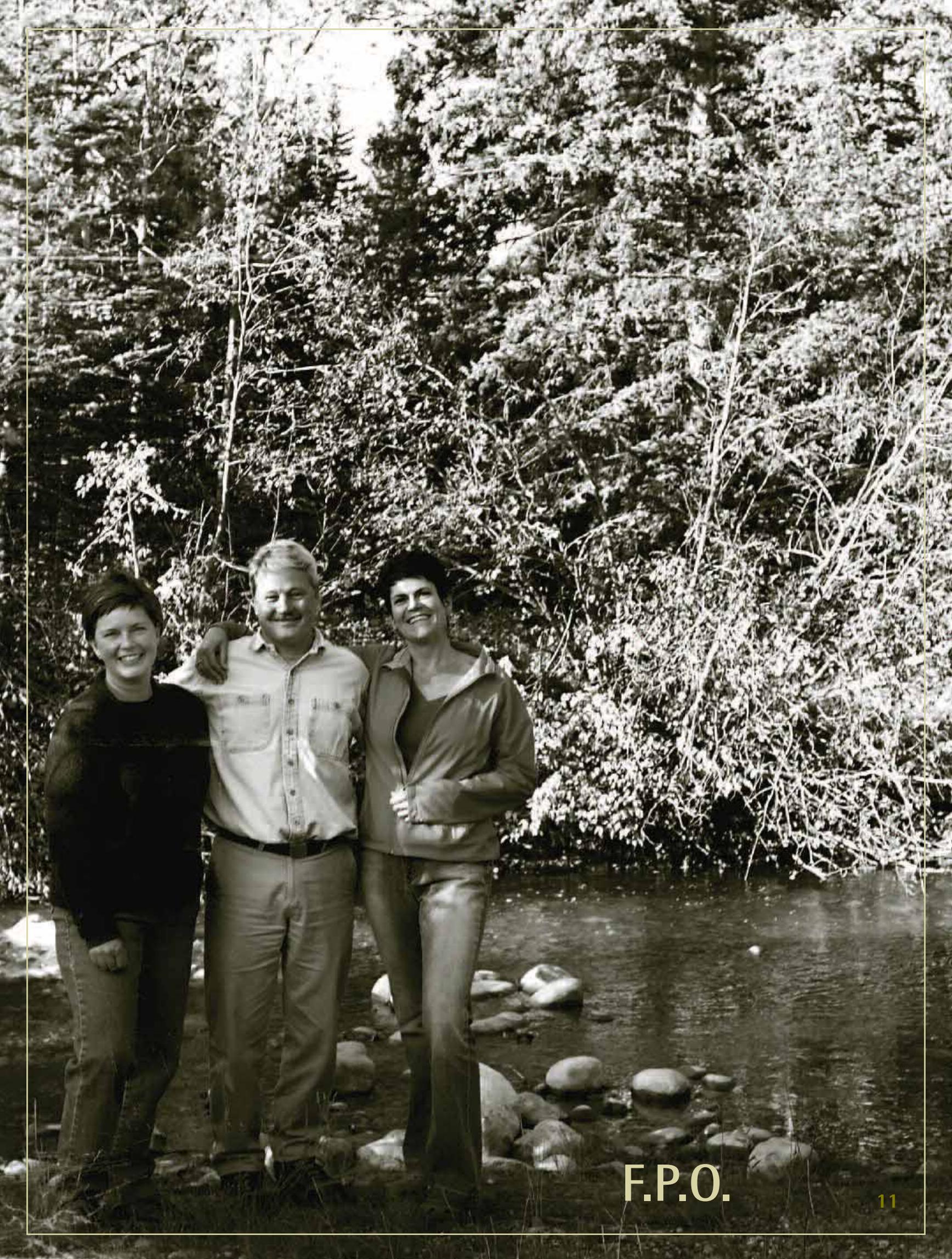
We wish to remain an active partner, with the expectation that the research and partnering philosophy of the Foothills Model Forest will continue and that we will build practical win/win opportunities together.

**RICK BLACKWOOD, REGISTERED PROFESSIONAL FORESTER**  
**Area Manager, Southern Rockies Area, Alberta Sustainable Resource Development**

Foothills Model Forest is a credible source of research information directly relevant to the land and resource management issues we deal with. And its partnership base is representative of the broad range of stakeholders with whom we interact every day.

The new information and tools created by the Model Forest allow us to continually evaluate how we are doing things, based on the best available information. These products support a more robust discussion relating to resource management issues, founded on good information and a broad range of interests – rather than on a singular point of view.

As the future unfolds, we hope to continue using results coming out of this research institution. We're also eager to provide input and advice that will help shape future research, to meet the ever-changing information needs and resource management questions that confront us.



F.P.O.

**CLIFF SMITH, CHAIR**  
Alberta Forest Genetic Resources Council

The Foothills Model Forest has been a huge benefit to the Alberta Forest Genetic Resources Council through research and collaborative initiatives undertaken in areas of common interest.

This work yields leading-edge knowledge and tools in important practical forest management issues such as grizzly bear habitat needs, natural disturbance regimes, silviculture practices and growth and yield predictive modeling. Technology transfer is current and focused on real-world priorities.

Our collaborative relationship led to a very successful Post-Harvest Stand Development Conference in 2006. And for the future, we look forward to continued collaboration in areas of shared interest such as genomics, silviculture, tree improvement and forest management.

**CONNIE BRESNAHAN, OUTREACH AND EDUCATION COORDINATOR**  
Hardisty Creek Restoration Project, West Athabasca Bioregional Society

Foothills Model Forest was the first project partner to join us in developing the multi-stakeholder Hardisty Creek Restoration Project, officially launched in 2003.

The Model Forest has contributed invaluable scientific and technical expertise towards the biophysical restoration of Hardisty Creek, and has been a great help to our group in our public and school watershed education events and activities.

Our local watershed group has learned a great deal, through technology transfer, from the Model Forest's watershed restoration expertise and administrative direction. The power of partnerships is apparent in this restoration project, and we look forward to working with the Model Forest and the entire Project Steering Committee for the successful completion of the project in 2010.

**DEENA CLAYTON, SENIOR ENVIRONMENTAL COORDINATOR**  
Land Management, Health, Safety, Environment and Sustainable Development, ConocoPhillips Canada

We value the Foothills Model Forest's multi-stakeholder approach to program delivery, since it allows us to build relationships and partnerships within and outside our industry.

Through Model Forest programs such as the Foothills Stream Crossing Program and the Caribou Landscape Management Association, we are able to better plan, manage and monitor our footprint on the landscape.

Multi-stakeholder participation has promoted understanding between industry sectors, government and communities. This leads to outcomes that are more applicable, and more likely to be implemented successfully.

Research from the Foothills Model Forest is practical and applied, so its processes and results can be extended to other areas where ConocoPhillips operates. For example, the Foothills Stream Crossing Program could potentially be implemented elsewhere in Alberta and a similar grizzly bear mapping project could be conducted in British Columbia.

Beyond March 31, 2007, we will continue participation in and support for those projects in which we are currently involved, and others that may benefit ConocoPhillips Canada.



F.P.O.

September 2005

We provided support for a government-led Little Smoky Caribou Calf project, which protected 10 cows and their newborn calves from wolves and other predators in the region until early summer, when calves would reach a suitable size to improve their survival chances in the wild. The caribou calf survival project is a population management tool that can be used to support long-term

Our whole is truly the sum  
of these very valuable parts.

Partnership is the lifeblood of the Foothills Model Forest. Through our partners' contributions, our tools and knowledge are integrated into land and forest management policy, planning and practice. Hence the advancement of forest and land management in Alberta. The strength of our organization would not be what it is today without our partners' commitment and we are honored to have contributions of all shapes and sizes.

## SPONSORING PARTNERS

Sponsoring partners Alberta Sustainable Resource Development, Jasper National Park, Natural Resources Canada and West Fraser Mills Ltd. make a five-year commitment to the Foothills Model Forest. In 2005/2006 the four sponsoring partners' combined contribution exceeded \$1.8 million.



## FUNDING PARTNERS

### Management Partners

Management partners provide financial and in-kind support to the Foothills Model Forest. They are also responsible for land, resource, or forest management, and are interested in using model forest knowledge and tools in their businesses.

Ainsworth Lumber Company Ltd.  
 Alberta Community Development  
 Alberta Energy  
 Alberta Newsprint Company  
 Anadarko Canada Corporation  
 Banff National Park  
 Blue Ridge Lumber (1981) Ltd.  
 BP Canada Energy Company  
 Buchanan Lumber/Tolko  
 Burlington Resources Canada Ltd.  
 Canadian National Railway  
 Canadian Natural Resources Ltd.  
 Canfor Corporation  
 ConocoPhillips Canada Resources Ltd.  
 Daishowa-Marubeni International Ltd.  
 Department of Fisheries and Oceans  
 Devon Canada Corporation  
 Elk Valley Coal – Cardinal River Operations  
 EnCana  
 Foothills Forest Products  
 Husky Energy  
 Manning Diversified Forest Products  
 Millar Western Forest Products Ltd.  
 Petro-Canada Ltd.  
 Shell Canada  
 Spray Lake Sawmills  
 Slave Lake Pulp  
 Suncor Energy  
 Sundance Forest Industries Ltd.  
 Sundre Forest Products – A Division of West Fraser Mills Ltd.  
 Talisman Energy Inc.  
 TransCanada Pipelines Limited  
 Weyerhaeuser Company Limited

### Program and Project Partners

Program and project partners provide financial and in-kind support to specific programs or projects. These organizations believe in and support the Foothills Model Forest.

AADAC  
 Alberta Aboriginal Affairs and Northern Development  
 Alberta Caribou Committee  
 Alberta Chamber of Resources  
 Alberta Conservation Association  
 Alberta Forest Genetic Resources Council  
 Alberta Forest Products Association  
 Alberta Innovation and Science  
 Alexis Nakota Sioux First Nation  
 Aseniwuche Winewak Nation  
 Bandaloo Landscape-Ecosystem Services  
 BC Southern Interior Growth and Yield Co-Op  
 Canadian Association of Petroleum Producers  
 Canadian Cooperative Wildlife Health Centre  
 Environment Canada  
 EVS Environment  
 Foothills Ojibway Society  
 Forest Resource Improvement Association of Alberta (FRIAA)  
 The Forestry Corp.  
 Hinton Fish & Game Association  
 Hinton Training Centre  
 Kingston Ross Pasnak  
 Manning Forestry Research Fund  
 Nakcowinewak Nation  
 NSERC  
 Petroleum Technology Alliance Canada  
 Rocky Mountain Elk Foundation Canada  
 Sunchild First Nation  
 TJG Consulting  
 Town of Hinton  
 Trout Unlimited  
 University of Alberta  
 University of British Columbia  
 University of Calgary  
 University of Saskatchewan  
 University of Waterloo  
 West Athabasca Bioregional Society  
 Western Boreal Aspen Corporation

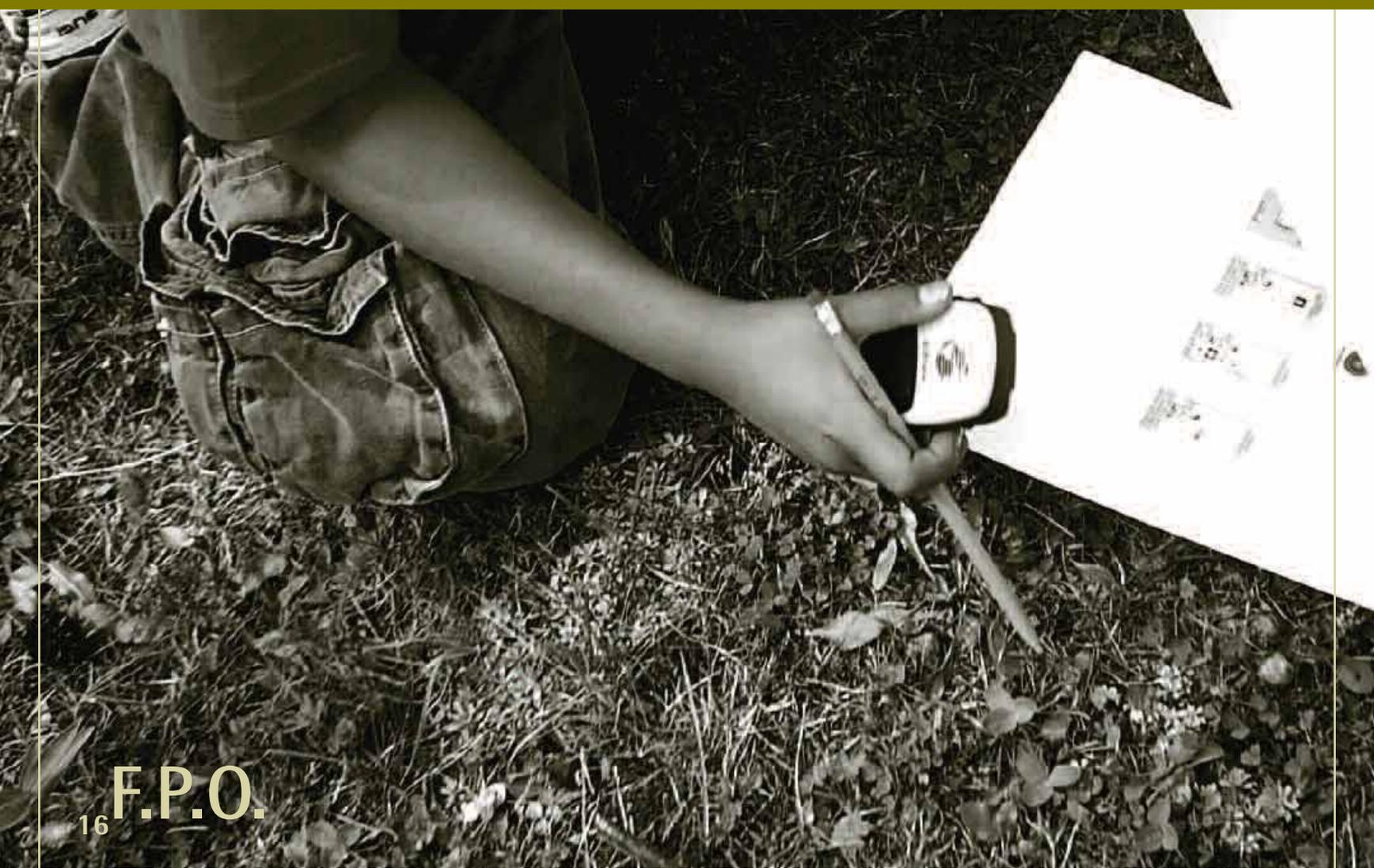
### Other Partners

The following associations, businesses, and communities support the vision and goals of the Foothills Model Forest organization.

Alberta Chamber of Resources  
 Alberta Research Council  
 AVID Canada  
 Canadian Centre for Remote Sensing  
 Canadian Institute of Forestry  
 Council of Forest Industries  
 College of Alberta Professional Foresters  
 Cows and Fish Program  
 Ember Research Services Ltd.  
 The Fishin' Hole  
 Forest Engineering Research Institute of Canada (FERIC)  
 Forest History Society, Durham NC  
 Golder & Associates  
 Inside Education  
 Linnet – The Land Systems Company  
 Pulp and Paper Research Institute Canada  
 Sustainable Forest Management Network  
 Telemetry Solutions  
 UBC Press



*our programs*



## ABORIGINAL INVOLVEMENT

Four communities have signed the "Guiding Principles" document and are actively conducting Traditional Cultural Studies. They are Asinewuche Winewak Nation (Grande Cache), Foothills Ojibway (Hinton), Nakcowinewak Nation (Hinton) and Sunchild First Nation. Asinewuche Winewak Nation, Foothills Ojibway, and Nakcowinewak Nation are scheduled to complete their Traditional Cultural Studies within the Foothills Model Forest landbase by March, 2007. Sunchild First Nation has just begun its study, which will be completed by mid 2007.

The Referral Process database continues to grow as the communities input their data each month. Over 800 cultural sites are protected as of August, 2006. Three pilots of the Referral Process have been conducted. The industrial proponents using the system are West Fraser Mills Ltd. and Shell Canada. Thus far, nine cultural sites were protected from potential disturbances. The next phase for the Referral Process will be to grow the base of partners and clients, and to build web accessibility into the data management system.

Our Aboriginal Involvement Program has been featured as a best practice by Alberta Aboriginal and Northern Affairs (Fall 2005) and continues to demonstrate innovation in the field of Aboriginal community relations, cultural site protection, and sustainable resource management.

## ADAPTIVE FOREST MANAGEMENT HISTORY PROGRAM

This Program develops books and reports that explain and illustrate the history, context and results of forest policy and practice in west-central Alberta. It supports Foothills Model Forest goals to demonstrate sustainable forest management, and to improve public and professional understanding of the subject.

**Learning from the Forest: The Evolution of Adaptive Management at Hinton, Alberta** (Fifth House, 2003), examines the evolution, stewardship ethic and science supporting the sustainable forest management program in the Hinton Forest. The book shows how

sustainable forest management, based on clear goals and objectives and agreed-to outcomes, was achieved, and how Foothills Model Forest research and knowledge was applied in that management. It has proven useful in illustrating the complexity of sustainable forest management, and in rebutting certain assertions made by activist groups.

**A Hard Road to Travel** is currently at the final design stage. It examines the remarkable human and ecological history of the upper Athabasca region, from prehistoric times to the arrival of large-scale industrial forest management in 1955. Co-writers Peter Murphy and Bob Udell have presented a number of talks based on this book, within and beyond Alberta, resulting in a wider understanding of the roots of and context for today's forest management in the province. New information, maps and photos from this book are being used in support of the David Thompson Bi-Centennial celebrations that will start in 2007.

**Mountain Trails** is another work in progress. It is the memoir of Jack Glen, a Dominion and then an Alberta Forest Service Ranger at Entrance from 1920 to 1942. He saw and described much of the early work in fire control and development in the forests around Hinton, including the transition from dominion to provincial resource ownership. It will be illustrated by Glen's own photos and others as from the Forest Protection Collection, as well as some new maps.

A third publication is called **STOP Revisited – a Retrospective on an Environmental Campaign Gone Wrong**. It recalls the year 1971, when an organization called Save Tomorrow – Oppose Pollution (STOP) commissioned Arnim Zimmer to visit North Western Pulp and Power's Hinton forestry operations and examine environmental and forestry practices there. His damning, well-publicized 1972 report and the photographs it contained were highly controversial and misleading. Twenty five years later, this new report revisits, re-photographs and describes the subsequent (and vigorous) regeneration of Zimmer's "wastelands."

## CARIBOU LANDSCAPE MANAGEMENT ASSOCIATION

An Integrated Industry Access Plan was submitted in November, 2005 and endorsed by the provincial government in June, 2006. Its primary objective is to reduce the industrial footprint through such means as improved coordination, integration and management of access on the landscape by all users, identification of opportunities to reduce the long-term access footprint (e.g. reduced right-of-way widths and reduced access duplication when compared with the "plan as you go" approach), and providing recommendations for operational policy relating to integrated access management in caribou ranges. This type of integration is an example of how industrial sectors can work together to achieve sustainable forest management. The Caribou Landscape Management Association is to report by September 30, 2006, on our general progress, monitoring of the footprint, and a reclamation plan for habitat restoration.

We provided support for a government-led Little Smoky Caribou Cow Calf Protection Project, which protected 10 cows and their newborn calves from wolves and other predators in the region until early summer, when calves would reach a suitable size to improve their survival chances in the wild. The caribou calf survival project is a population management tool that can be used to support long-term sustainable forest management.

A review of current practices and guidelines for industrial activity in woodland caribou range is under way to test whether they are in fact the "Best Practices for Caribou." This review will focus on their effectiveness for caribou and providing recommendations for improvements and new practices, as well as identifying potential research in support of sustainable forest management.

Another role for us has been to support and facilitate industrial input into development of the province's West Central Recovery Plan for woodland caribou. It was perceived that the provincial recovery process lacked a clear understanding of how industrial sectors would provide meaningful input into the plan's development. Along with other partners, we provided support and expertise in the development of an industrial working group that will concentrate on several key issues and indicators regarding forest age class, human footprint and forest pattern.

We believe recovery success and subsequent sustainable forest management will only occur if a coordinated, simultaneous, sustained, and comprehensive strategy that addresses all indicators as a package is developed, implemented, evaluated and adjusted as results are known and knowledge increases. The adaptive management structure of simultaneous action on multiple targets focusing on relationships between indicators and their relative importance is critical for success. For example, if a wolf density target is achieved but caribou do not respond as expected, adaptive management processes would be used to document and understand the reasons and to adjust the targets and actions as required achieving the desired outcome.

## COMMUNICATIONS AND EXTENSION PROGRAM

Phase III (April 1, 2002 to March 31, 2007) of the Foothills Model Forest increased its focus on knowledge and technology transfer. The Board of Directors recognized that the transfer of model forest knowledge and tools required a structured and strategic approach. Therefore, the Communications Program was expanded to include Extension. The Program maintains responsibility for communications and outreach to the public. Additionally, it works with researchers and partners to facilitate knowledge transfer.

The Communications and Extension Program's Phase III mandate was ambitious and required plans and tactics that were:

1. Results driven
2. Leveraged additional funds
3. Collaborative
4. Focused on innovation

The Program's approach has proven effective as illustrated by the highlights below:

- Hits to the Foothills Model Forest website have increased by 90% since the first year of Phase III to over 1.2 million hits per year. The Foothills Model Forest website is a valuable and efficient knowledge transfer and communications tool.
- The core budget of the Communications and Extension Program is used to leverage additional funds. In 2005/2006 additional funds were leveraged at a ratio of 2:1.
- In 2005/2006, the Foothills Model Forest collaborated with the Foothills Growth and Yield Association and the Alberta Forest Genetic Resources Council on the Post-Harvest Stand Development Conference. The conference was well-received. More important, recommendations from the conference are being developed into action plans in partnership with key organizations.
- The Natural Disturbance Program works closely with the Communications and Extension Program. Together the Programs have implemented a five-year Communications and Extension Strategy. A survey in March concluded that Foothills Model Forest Natural Disturbance research is used on 90% of Alberta's forest management areas and influences Saskatchewan forest management policy.
- Foothills Model Forest partnered with the Government of Alberta on the Alberta's Forests exhibit at the Smithsonian Folklife Festival in Washington, D.C.

A long-term and sustained commitment to communications and knowledge transfer contributes to the model forest's reputation as being a practical and valuable organization.

## FISH AND WATERSHED PROGRAM

The Fish and Watershed Program works closely with partners who sustain the fish habitat and water quality within the working forest. Our partners take pride in their careful operations near water and view these stewardship responsibilities as a privilege of operating on public land. In 2005, the Fish and Watershed Program focused on the new Riparian Management Research Project. This three-year project has three primary objectives. First, we will support land stewards by offering ecologically sound improvements to current timber harvesting practices; second, we will develop science-based models to forecast outcomes of various management scenarios on water resources; and third, we will develop evaluation procedures that will help land stewards determine the effectiveness of their best practices.

Our first objective is to ensure that land use practices are based on sound ecological knowledge. Historically researchers have focused their investigations on the few streams large enough to draw drinking water from, or those streams that support sport fish. However, the qualities of large streams reflect the water delivered to them by numerous small headwater streams. Dr. Marwan Hassan, Associate Professor from the Department of Geography at the University of British Columbia, is the principle investigator in our project. Under Dr. Hassan's direction, we are studying the linkages between vegetation along small headwater streams and the amounts of fine sediment that these creeks carry to downstream areas. With a better understanding of the roles of vegetation in regulating water quality, stewards will have an improved ability to predict the effects of streamside harvest on aquatic values.

Our second objective is to develop new forecasting tools that fit into the forest management planning process. We will develop models to forecast short-term and long-term outcomes at individual sites and across entire watersheds. Use of such models is an important part in the process of gaining approval to conduct land management activities. To calibrate our long-term model we are measuring historical records of water quality contained in lake bottom sediments. This model is intended to allow us to compare the effects of various management scenarios with those created by natural disturbances including fires and floods.

Our third objective is to provide land stewards with procedures to measure the performance of their best practices. For example, land stewards in coastal British Columbia, and the Boreal Shield, have systems to measure the effects of land use activities on their streams. However, these systems do not translate well to the Foothills region because of differences in climate and physical geography. Our Riparian Management Research project will provide an evaluation system that is appropriate for streams within the Foothills during this period of increasing industrial pressure.

Through the development of sound ecological knowledge, science based models, and an appropriate evaluation system, the Fish and Watershed Program's Riparian Management Research Project will contribute to the ability of land stewards to meet their mandates within an ecologically sound and sustainable working Foothills forest.





### GRIZZLY BEAR RESEARCH PROGRAM

In recent years research scientists from many disciplines have helped develop three key products - a land cover map that classifies the landscape into broad habitat classes, a map that shows the probability of grizzly bears occurring across the landscape at different times of the year, and a movement corridor map showing where on the landscape bears are most likely to travel. These maps are used by resource managers to minimize disturbance to important grizzly bear habitats.

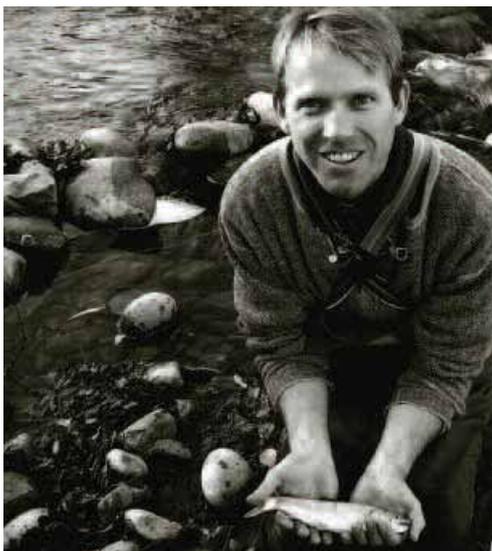
Research partners and collaborators include provincial and federal governments; Natural Sciences and Engineering Research Council of Canada (NSERC), many member companies of the Alberta Forest Products Association and member companies of the Canadian Association of Petroleum Producers. This is a tremendous achievement and requires significant effort in communications and information exchange to ensure common understandings of research results and program tools.

In 2006, Alberta Sustainable Resource Development was approved for the Alberta Innovation and Science Award. Funds from this award will be put toward grizzly bear research over the next two years. Part of these funds will facilitate the completion of the map products and tools over the province's entire grizzly bear range; provide the

necessary training to enable users to understand and maximize the use of these products in their work environments; and to investigate the relationship between landscape structure, landscape change, and health in grizzly bears.

This new health initiative will determine if there are any linkages between the health profiles of individual grizzly bears and the landscape structure and change within their home ranges along a gradient of human use. The development of new techniques to detect long-term physiological stress in grizzly bears and the creation of animal health profiles for this species will provide a better understanding on how the changing landscapes impacts ecosystem health over time.

We were involved in the development of a camera that can be attached to a grizzly bear collar. These cameras can store up to 35,000 images and are equipped with a gyrocompass and a pedometer to record the direction and speed of the bear. Information from these cameras will supplement the land cover maps and help discern habitat use for activities such as bedding, foraging and traveling. All this information will serve to improve our understanding of grizzly bear ecology that can then be used to improve our management and conservation of grizzly bears in Alberta.



### FOOTHILLS STREAM CROSSING PROGRAM

The Foothills Stream Crossing Program had many achievements in 2005/2006 including agreement and approval of a number of operating rules and procedures relating to:

- Voting and non-voting membership
- Roles and responsibilities of the Steering Committee
- Relationship with the Foothills Model Forest
- Role of the provincial and federal governments
- Duties of the Manager of the Program
- Governance

We operate under the umbrella of the Foothills Model Forest rather than as a separate association.

We developed and field-tested draft stream crossing inspection protocols in September of 2005, then finalized the protocols during the winter of 2005/2006. Subsequently, an inspection manual based on these protocols was developed. The Woodland Operators Learning Foundation provided technical support and an editor, and the Department of Fisheries and Oceans provided financial support through its Stewardship Project. A budget was created to complete an initial inspection of member's stream crossings during the summer of 2006.

The Steering Committee held six meetings during the year. Our membership on the committee now includes 10 voting members and six non-voting members. Presentations were made during the year to the Provincial Water Course Committee, a Sustainable Resource Development workshop, Alberta Society of Professional Biologists' annual meeting and workshop, Canadian Institute of Forestry's spring workshop, Foothills Model Forest Board of Directors, and a Foothills Model Forest Research Forum.

### FOOTHILLS GROWTH AND YIELD ASSOCIATION

We have made significant progress in four areas of work that support Foothills Model Forest goals.

In demonstrating sustainable forest management, we have been active in the installation, maintenance, restoration, measurement, analysis, interpretive signage and reporting of long-term field trials demonstrating the response of stands to silvicultural practices such as clear-cutting, thinning, planting, tending and fertilization. Thirteen year-old trials were restored, measured and reported, including co-publication of results with the Canadian Forest Service. Three major new trials were initiated involving assessment and long-term monitoring of lodgepole pine regeneration growth and development under basic and enhanced management over a wide and controlled range of sites and treatments. A study comparing the productivity of managed post-harvest versus natural fire-origin stands was completed, reported, and presented at a major international forestry conference.

Another goal is to develop and implement mechanisms that result in wider understanding and application of accrued knowledge and technology for sustainable forest management. We have documented and described experimental techniques in manuals and project reports. All experimental results have been, or are being, translated into forecasts of growth and yield responses to management interventions.

In terms of communication and outreach, we were successful in engaging nine forest companies, other research cooperatives, universities and two levels of government in the sharing of information and support. Twelve technical reports and seven bulletins were published on our website, and we were very involved in helping program and convene the 2006 Post-Harvest Stand Development Conference.

Work to support and influence policy that improves the practice of sustainable forest management included the gathering of previously unavailable information on lodgepole pine regeneration critical to the development of sound regeneration standards and strategies. In addition, we helped initiate dialogue and coordination between practitioners, researchers and government regulators involved in post-harvest management. These dialogues are aimed at improving policies and strategies for managing the new forest emerging after the harvest of fire-origin stands.

## GEOGRAPHIC INFORMATION SYSTEMS

Activity within the Geographic Information Systems Program supports all research activities within the Foothills Model Forest. Key project area highlights for the past year include:

- We completed the physical structure of the Traditional Cultural Studies spatial database. The related tabular (Access) database will require upgrades over time. A pilot Referral Process has been run.
- We provide Geographic Positioning Systems and other field-related training to field data collectors involved in Traditional Cultural Studies
- We have worked with the Caribou Landscape Management Association to develop an ArcIMS Internet mapping website that displays overview maps relating to access and other features for association users. Other demonstration mapping websites or "services" have been developed for Fish and Watershed, Grizzly Bear and other research programs
- Funds were provided by the Caribou Landscape Management Association to hire a half-time person to assist in updating road access data for that Association's spatial database
- We loaded more contractor field data into the Foothills Growth and Yield Association database in the fall of 2006, preparatory to analysis and subsequent model development in 2007
- The Geographic Information Systems Working Group, representing government and industry, finalized a draft vegetation data model that will help standardize how data is stored, leading to information that is more consistent, sharable and transferable
- The Grizzly Bear Resource Selection Function calculator has been adapted at the request of partners for use with elk and wolf populations. The management tool helps predict the relative probability of animal occurrence on the landscape
- We are assisting with preparation of the follow-up Criteria and Indicators "State of the Forest" report, due in March, 2007

## NATURAL DISTURBANCE PROGRAM

The Natural Disturbance Program celebrated its tenth anniversary at the Foothills Model Forest in 2006. Underlying our Program is the belief that shaping practices such as timber harvesting and prescribed burns so that they emulate natural disturbances is a fundamental step in conserving biodiversity.

Today our focus is shifting from research to the application of this new knowledge for forest and resource management decision-making. Due to the complexity of the subject area, we have expanded the Program considerably over the years. However, thanks to a long-term

vision of how the Program's partners might ultimately use natural disturbance patterns in their day-to-day activities, the project network is highly integrated.

We have developed an introductory short course and Quicknotes that explain the Program and how it is relevant to resource managers' daily work. Research Reports shed light on particular patterns and processes of natural disturbance. A Riparian Woody Debris Dynamics Study looks at how natural disturbance dynamics affect other ecological processes. The Highway 40 North Demonstration Project is helping us learn how to create nature-based disturbance plans on a broad and diverse landscape. The results of all our work come together in more short courses that focus on integrating the knowledge gained, and in a computer model that will help managers create their own "natural" disturbance patterns when conducting activities on the landscape.

## SOCIAL SCIENCES PROGRAM

We delivered a final report to Foothills Model Forest on our research into the socio-economic dimensions of community vulnerability to mountain pine beetle. Our studies examined exposure and adaptive capacity from biophysical, social, economic, and political perspectives and compared results to communities in British Columbia. Also completed during the year was the report Beyond boredom: Contributing factors to substance abuse in Hinton, Alberta. This study examined the relationship between drug and alcohol abuse and the socio-economic structure of Hinton.

Our Natural Resource Accounts study accounted for the non-commercial values of the forest, which include activities such as camping, hiking and hunting, as well as biodiversity and water quality. The Natural Resource Account developed for the Foothills Model Forest may potentially be incorporated into forest management plans, thereby quantifying multiple forest values.

Economists from the Canadian Forest Service updated the computable general equilibrium model and regional economic indicators database and summarized regional economic trends. One such trend from 1996 to 2001 was that the Foothills Model Forest region experienced an economic transition. The regional mining sector declined due to depleting reserves at existing mines and a fall in the global price of coal. Simultaneously, world natural gas prices were on the rise and natural gas exploration and extraction significantly increased in the Foothills Model Forest. Tourism also declined, possibly due to climatic events and a sharp decline in global tourism demand following the events of September 2001. The forest industry remained stable.



December 2005

Internet mapping technologies or tools such as Integrated Publishing  
Access Plan and grizzly bear Resource Selection Function make  
can be accessed from a desktop in Calgary, Whitecourt or Jasper.  
Through the Resource Management Executive Series,

We thrive by working together.



## WILDLAND FIRE - HUMAN DIMENSIONS

Reducing the risk to human settlements from wildland fire has gained increased attention in recent years and is of interest to fire management agencies across the country. Foothills Model Forest funded two studies to examine some of the human dimensions associated with mitigating the risk from wildland fire.

The Lost Creek Fire of 2003 burned 22,000 hectares in southern Alberta, affected several communities and caused the evacuation of about 2,000 residents. In cooperation with the Social Sciences Program, one of our studies examined how residents' and community leaders' experience with the fire affected their perceptions of wildfire risk, knowledge, and willingness to engage in risk reduction activities such as those recommended by FireSmart®. The study showed that the adoption of risk reduction activities is based on a complex suite of factors including knowledge of risk reduction activities; perception of wildfire risk (partly due to the home's proximity to forested and recently burned areas); willingness to accept risks; alignment of activities with homeowners values/needs (privacy, wildlife, aesthetics, healthy forests); and personal constraints (such as time, money, access to water). Several management and policy implications were identified that focus on public education, tailoring residential risk reduction activities to homeowner values, providing financial incentives for participation, and community-level mitigation strategies. However, it appears that some residents were willing to accept the risks associated with living in the wildland-urban interface, and were not willing to adopt all recommended risk reduction measures, even though they acknowledged the risk and knew how to implement the risk reduction measures.

Another study conducted in cooperation with the Social Sciences Program examines how Jasper residents perceive the risks from wildfire, their acceptance of fuel modification within national parks, and their preferences for mitigation measures. The role of park managers, municipal governments and other agencies in influencing responses at the resident and community levels will also be examined. Residents have become engaged and involved in a pilot project aimed at reducing the risk of wildfire to the town of Jasper and adjacent developments, and to improve ecosystem health by restoring more natural variation in the forest structure. Determining the factors that contributed to their involvement will help other communities (both in and outside the model forest) develop their own wildland fire management strategies.

## WILDLAND FIRE - RESEARCH

While wildland fire is a constant forest renewal process in Canada, there is a risk to life and property that accompanies fire's beneficial contribution at the landscape level. Three recent fires in Alberta have provided us with the opportunity for research studies focused on both the benefits and the risk of wildland fires. The fires are well documented and represent extreme levels of fire behavior with significant community impacts including property loss, extended evacuations and industry disruptions. Foothills Model Forest has coordinated and funded 12 research initiatives that explore enhanced community protection and the ecological role of wildland fire:

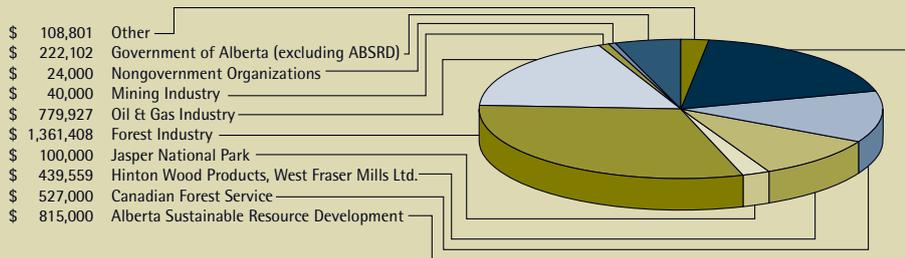
- Real-time fire-spread modeling
- Forest fuel flammability of young and old aspen stands
- Fire regime analysis
- Post-fire riparian dynamics
- Post-fire elk habitat
- Community attitudes following an evacuation experience
- Boreal moss succession after fire in spruce dominated forests
- Ecological effects on Saproxylic beetles
- Soil nutrients and organic matter response to fire
- Involving the public in community protection planning
- Repeat photography of early 1900 fire patterns
- Fuel management guidelines for community protection

Fire management is a fundamental cornerstone of sustainable forest management. We believe the 12 research studies have contributed to enhanced community protection and a more sophisticated approach to understanding and applying the ecological contribution of wildland fire at the landscape level.

## SUMMARY OF FINANCIAL STATEMENTS

The Foothills Model Forest audited financial statements are available at [www.fmf.ca](http://www.fmf.ca)

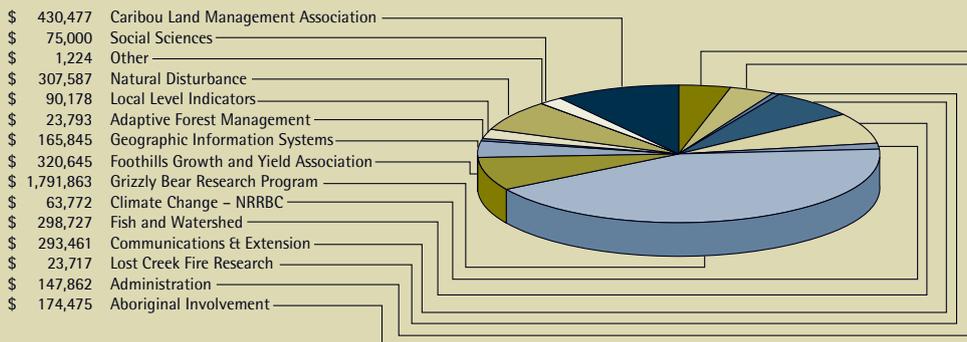
### FOOTHILLS MODEL FOREST / INCOME (Year ending March 31, 2006)



In 2005/2006, Foothills Model Forest received \$4,417,797 in funding to support its research, knowledge transfer and communications programs. A breakdown of funding sources is as follows:

- Alberta Sustainable Resource Development (ABSRD) contributes 18% of funds
- Canadian Forest Service contributes 12% of funds
- Jasper National Park, Parks Canada contributes 2% of total funds
- Hinton Wood Products, West Fraser Mills Ltd. contributes 10% of total funds
- The forest industry contributes 31% of total funds
- The oil and gas industry contributes 18% of total funds
- Non-government organizations contribute 1% of total funds
- The Government of Alberta (excluding Alberta Sustainable Resource Development) contributes 5% of total funds
- The mining industry contributes 1% of total funds
- Additional sources of funding include items such as interest, rebates and administration fees amount to 2% of total funding
- The Foothills Model Forest receives additional in-kind support from its partners. In 2005/2006 this amounted to approximately \$815,000

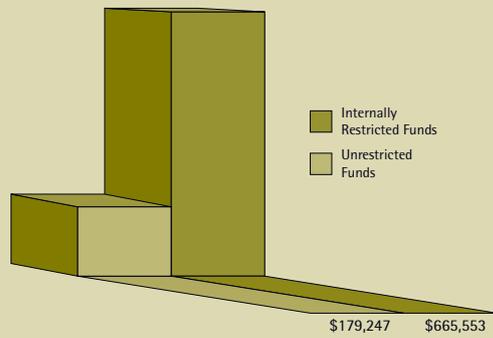
### FOOTHILLS MODEL FOREST / EXPENSES (Year ending March 31, 2006)



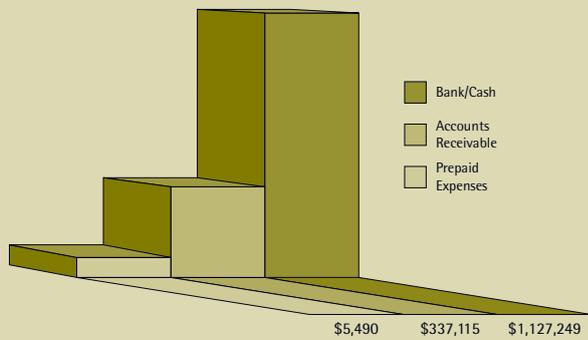
In 2005/2006, The Foothills Model Forest expenses totaled \$4,208,626. Upon approval from the Foothills Model Forest Board of Directors, each project area is responsible for its own budget and expenditures. In 2005/2006 some expenses were paid using funds from the prior year's fund balances.

# STATEMENT OF FINANCIAL POSITION

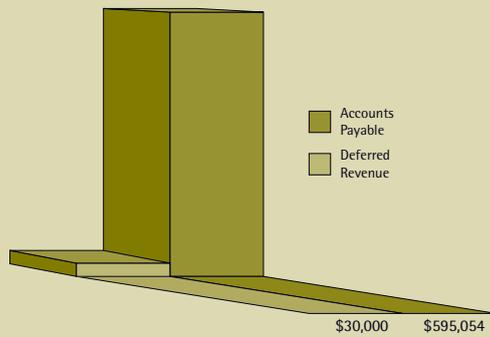
As of March 31, 2006



FUND BALANCES (As of March 31, 2006)



ASSETS (As of March 31, 2006)



LIABILITIES (As of March 31, 2006)



## BOARD OF DIRECTORS

Rod Alexis, Chief, Alexis Nakota Sioux First Nation  
 Jim Beck, Professor, Department of Renewable Resources, University of Alberta  
 Rick Bonar, Chief Biologist and Planning Coordinator, Hinton Wood Products, West Fraser Mills Ltd.  
 Nick Burt, General Manager, Elk Valley Coal – Cardinal River Operations  
 Kyle Clifford, Area Manager, Parks and Protected Area, Alberta Community Development  
 Phil Comeau, Associate Professor, Department of Renewable Resources, University of Alberta  
 Bob Demulder, Integrated Landscape Management Program Manager, Alberta Chamber of Resources  
 Cliff Henderson, Assistant Deputy Minister, Forests, Alberta Sustainable Resource Development  
 Ron Hooper, Superintendent, Jasper Field Unit, Parks Canada  
 John Kerkhoven, Manager, Stakeholder Relations, Petro Canada Ltd.  
 John Kristensen, Assistant Deputy Minister, Parks and Protected Areas, Alberta Community Development  
 Keith McClain, Director, Science Policy and Strategy, Forestry Division, Alberta Sustainable Resource Development  
 Rachelle McDonald, Manager of Operations, Aseniwuche Winewak Nation  
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 Shira Mulloy, Manager, Stewardship, Canadian Association of Petroleum Producers  
 Eileen Sasakamoose, Lawyer, Alexis Nakota Sioux First Nation  
 Neil Shelly, Executive Director, Alberta Forest Products Association  
 Doug Sklar, Executive Director, Public Lands and Forests Division, Alberta Sustainable Development  
 Jim Skrenek, Executive Director, Wildlife Management Branch, Fish and Wildlife Division, Alberta Sustainable Resource Development  
 John Spence, Chair and Professor, Department of Renewable Resources, University of Alberta  
 Murray Summers, Chief Forester, West Fraser Mills Ltd.  
 Glenn Taylor, Mayor, Town of Hinton  
 Lorne West, Forestry Liaison Manager, Canadian Forest Service, Natural Resources Canada

## OFFICERS

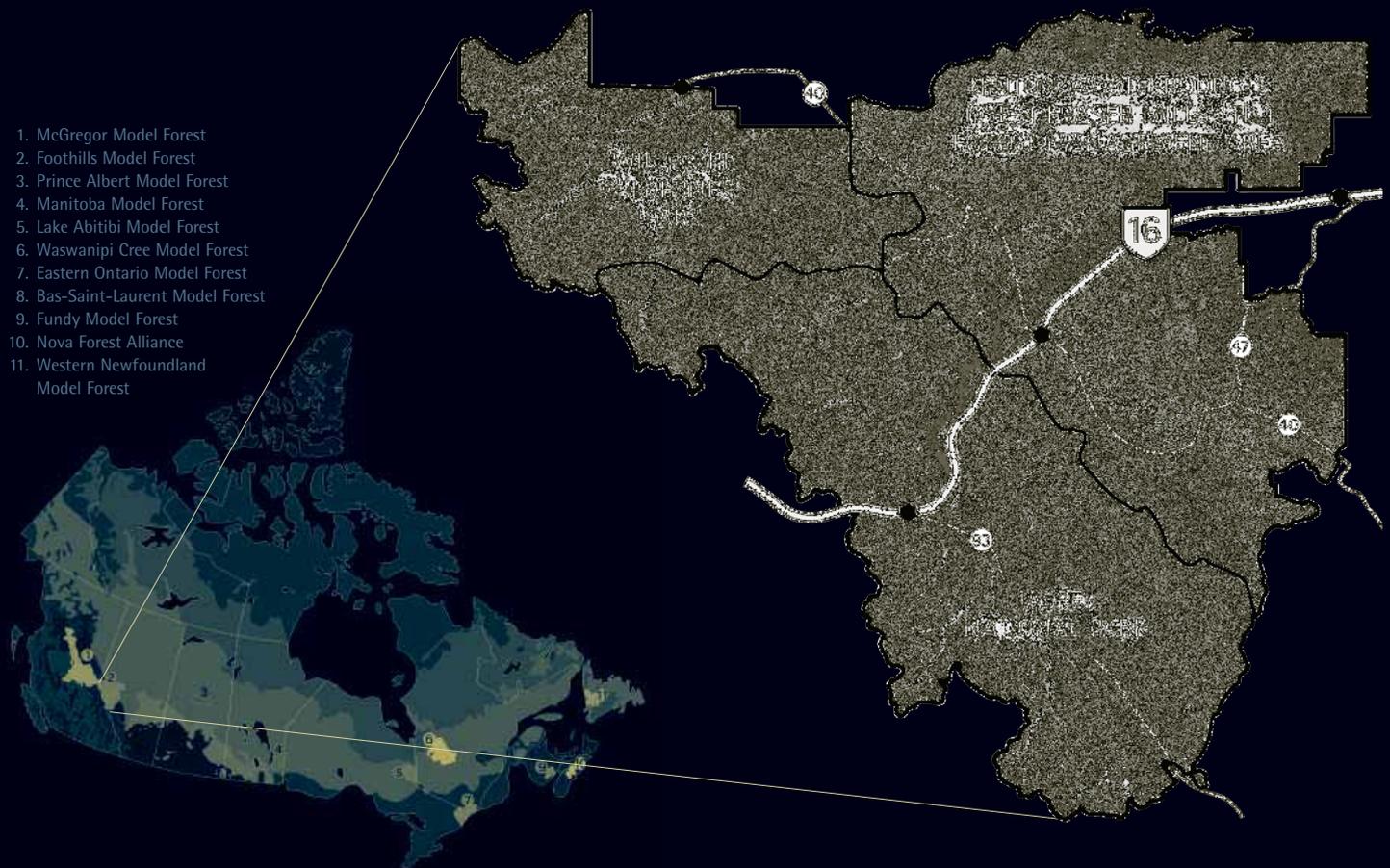
Jim Bouthillier, Legal Counsel, Foothills Model Forest; Lawyer, Shtabsky & Tussman, Barristers and Solicitors  
 Nicole Gravel, Treasurer, Foothills Model Forest; Woodlands Controller, Hinton Wood Products, West Fraser Mills Ltd.  
 Jim LeLacheur, President, Foothills Model Forest; Manager, Alberta Fibre Supply, West Fraser Mills Ltd.  
 Marsha Spearin, Secretary, Foothills Model Forest Board of Directors; Administrative Coordinator, Hinton Forest Resources, Hinton Wood Products, West Fraser Mills Ltd.

Canada's Model Forest Program was established in 1992 as part of Canada's Green Plan. Over the past 15 years, the Program and its partners have advanced forest management across Canada through shared skills and combined resources. Now in the final months of its third, five-year phase, the Program looks to continue reaching important milestones along the way.

Since being assigned not-for-profit status in May 2006, the Canadian Model Forest Network has provided local communities and diverse partners with the opportunity to continue to make advancements and improvements to forest management and community sustainability in Canada.

In June 2006, Natural Resources Canada launched its Forest Communities Program and in the coming year the Foothills Model Forest will be applying to become a representative site. In addition, selected sites within the Forest Communities Program will be members of the Canadian Model Forest Network.

While Canada's Model Forests are in a period of transition, Foothills Model Forest is fortunate that three of its four core sponsoring partners: Alberta Sustainable Resource Development, Jasper National Park and West Fraser Mills Ltd. are committed to the continuation of the Foothills Model Forest organization beyond March 31, 2007.



January 2006

We are a practical organization and will continue to develop  
Internet mapping technologies so tools such as Integrated District  
Assess Plan and gizzy bear Resource Selection Function maps  
can be accessed from a desktop in Calgary, Whitecourt or Jasper.  
Through the Resource Management Executive Series,  
we will continue to build and foster relationships with policy  
makers in industry and government to help fill the con-  
tains gaps between researchers and policy makers. We will continue  
to work with organizations such as Inside Education and the Science



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